REMARKS

Examiner has indicated the application has been filed with informal drawings. However according to Applicant's records, the application was filed with formal drawings. Another copy of formal drawings are enclosed herewith.

Examiner has rejected claims 1 through 20 under 35 U.S.C. § 103(a) as being unpatentable over USPN 4,631,533 (Mark) in view of USPN 5,821,537 (Ishihara). Applicant respectfully transgresses the rejection and requests reconsideration.

Criteria for a Rejection under 35 U.S.C. § 103(a)

The U.S. Patent and Trademark Office has set forth a methodology for establishing a *prima facie* case of obviousness. Specifically three basic criteria must be met.

> First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

See MPEP 706.02 (j).

Applicant believes the Examiner has failed to establish a *prima facie* case of obviousness for the claims extant in the present case because there are claim limitations in each of the independent claims that are not taught or suggested by any of the cited references. Below, Applicant identifies specific limitations in each independent claim that are not disclosed or suggested by the

cited art. Because a *prima facie* case of obviousness has not been established for the independent claims in the present case, all the independent claims are patentable. Based on the patentability of the independent claims, Applicant believes all claims respectively dependent thereon are also patentable.

Discussion of Independent Claim 1

Substep (a.1)

Independent claim 1 sets out a method for graphically presenting multiple signals. In a step (a), a signal for each measured frequency channel is separately represented on a display. In a substep (a.1) representations of the signals are superimposed. This is not disclosed by either Mark or Ishihara.

Examiner acknowledges that Mark fails to teach superimposed representations of signals. Examiner has argued that Ishihara discloses this feature of claim 1; however, Ishihara does not disclose or suggest superimposing representations of signals represented on a display.

Examiner has pointed to Figures 5 through 7 and 13 as examples of superimposed signals represented on a display. However, Figures 5 through 7 and 13 do not show information represented on a display, Rather, Figures 5 through 7 and 13 of Ishihara show graphs drawn on paper. See column 4, line 65 through column 5, line 13. Nothing in Ishihara discloses or suggests that the information on the graphs is represented on a display.

As can be seen from Figure 1 of Ishihara, there is no graphical display of data by the system in Ishihara. Rather, information that enters calculator 13 is processed as measurement data. See column 10, lines 36 through 39. Calculator does not display graphs, but rather numerical values. See Ishihara at column 11, lines 39 through 41.

Since Ishihara does not disclose representing information graphically on a display, it is clear that Ishihara does not disclose superimposing representations of signals represented on a display, as set out in step (a) and substep (a.1) of claim 1.

Substep (a.1.1)

Substep (a.1.1) sets out that center channel frequencies for all the representations of the signals are aligned relative to a single position on a first axis. This is not disclosed or suggested by Mark or Ishihara. Examiner has argued this feature is found in Mark at column 4, lines 24 through 45. This is incorrect.

At column 4, lines 24 through 45, Mark is discussing information displayed by a display device 1 shown in Figure 1. The vertical reference axis 7 shown within Figure 1 apparently represents duration of time. Within each channel 4 and 5 of Figure 1, a horizontal reference axis (if one were to be shown) apparently would represent amplitude. There is no axis shown in

Figure 1 of Mark (or Figure 2 of Mark) that represents signal frequency. Thus there is no axis on which a center channel frequency could be represented.

Since Mark does not disclose any axis on which a center channel frequency could be represented, it is clear that Mark does not disclose aligning center channel frequencies for all the representations of the signals relative to a single position on a first axis, as set out in substep (a.1.1).

Substep (a.1.2)

Substep (a.1.2) sets out that amplitude relative to a second axis is indicated for all the representations of the signals. This is not disclosed or suggested by Mark. Examiner has argued that this is found in Mark at column 4, line 55 to column 6, line 23. This is incorrect.

At column 4, line 55 to column 6, line 23, Mark discusses displaying each associated pair of component signals as Lissajous figures, as shown in Figure 2 of Mark. In Lissajous figures, two sine waves are displayed at right angles to each other. Thus Lissajous figures don't include an axis that could be described as representing signal amplitude.

Since Lissajous figures don't include an axis that could be described as representing signal amplitude, it is clear that at column 4, line 55 to column 6, line 23, Mark does not disclose indicating, for all the representations of the signals, amplitude relative to a second axis.

Applicant notes that it appears that in Mark, within each channel 4 and channel 5 of Figure 1, a horizontal reference axis (if one were to be shown) might represent amplitude. However, there is a separate horizontal reference axis for each component signal, and there is no single axis that is applicable to more than one signal component. Thus none of these axes in Figure 1 of Mark disclose or suggest substep (a.1.2) of claim 1 of the present case where amplitude relative to a second axis is indicated for all the representations of the signals.

Discussion of Independent Claim 9

Claim 9 sets out an instrument that measures multiple signals. An analyzer separately represents on the display a signal for each measured frequency channel. Representations of the signals are superimposed so that center channel frequencies for all the representations of the signals are aligned relative to a single position on a first axis. This is not disclosed by either Mark or Ishihara.

As discussed above, Examiner acknowledges that Mark fails to teach superimposed representations of signals. Examiner has argued that Ishihara discloses this feature of claim 9; however, Ishihara does not disclose or suggest superimposing representations of signals represented on a display.

Examiner has pointed to Figures 5 through 7 and 13 as examples of superimposed signals represented on a display. However, Figures 5 through 7

and 13 do not show graphical information represented on a display, Rather, Figures 5 through 7 and 13 of Ishihara show graphs drawn on paper. See column 4, line 65 through column 5, line 13. Nothing in Ishihara discloses or suggests that the information on the graphs is represented on a display.

As can be seen from Figure 1 of Ishihara, there is no graphical display of data by the system in Ishihara. Rather, information that enters calculator 13 is processed as measurement data. See column 10, lines 36 through 39. Calculator does not display graphs, but rather numerical values. See Ishihara at column 11, lines 39 through 41.

Since Ishihara does not disclose representing information graphically on a display, it is clear that Ishihara does not disclose an analyzer that separately represents on a display a signal for each measured frequency channel so that representations of the signals are superimposed and so that center channel frequencies for all the representations of the signals are aligned relative to a single position on a first axis, as set out in claim 9.

As discussed above, Examiner has argued that Mark at column 4, lines 24 through 45 discloses that center channel frequencies for all the representations of the signals are aligned relative to a single position on a first axis. This is incorrect.

At column 4, lines 24 through 45, Mark is discussing information displayed by a display device 1 shown in Figure 1. The vertical reference axis 7 shown within Figure 1 apparently represents duration of time. Within each

channel 4 and 5 of Figure 1, a horizontal reference axis (if one were to be shown) apparently would represent amplitude. There is no axis shown in Figure 1 of Mark (or Figure 2 of Mark) that represents signal frequency. Thus there is no axis on which a center channel frequency could be represented.

Since Mark does not disclose any axis on which a center channel frequency could be represented, it is clear that Mark does not disclose aligning center channel frequencies for all the representations of the signals relative to a single position on a first axis, as set out in claim 9 of the present case.

Likewise, claim 9 sets out that representations of the signals are superimposed so that for all the representations of the signals, amplitude is indicated relative to a second axis. This is not disclosed by either Mark or Ishihara.

As discussed above, Examiner has argued that this is found in Mark at column 4, line 55 to column 6, line 23. This is incorrect.

At column 4, line 55 to column 6, line 23, Mark discusses displaying each associated pair of component signals as Lissajous figures, as shown in Figure 2 of Mark. In Lissajous figures, two sine waves are displayed at right angles to each other. Thus Lissajous figures don't include an axis that represents signal amplitude.

Since Lissajous figures don't include an axis that represent signal amplitude, it is clear that at column 4, line 55 to column 6, line 23, Mark does

not disclose indicating, for all the representations of the signals, amplitude relative to a second axis.

Applicant notes that it appears that in Mark, within each channel 4 and channel 5 of Figure 1, a horizontal reference axis (if one were to be shown) might represent amplitude. However, there is a separate horizontal reference axis for each component signal, and there is no single axis that is applicable to more than one signal component.

Discussion of Independent Claim 17

Claim 17 sets out a method for measuring multiple signals. Step (b) of claim 17 sets out that masks that indicate when values for the signals are outside channel frequency limits are displayed. This is not disclosed or suggested by Mark or Ishihara.

Examiner has suggested that this feature is disclosed by Ishihara at column 12, line 23 to column 13, line 64. This is incorrect.

At column 12, line 23 to column 13, line 64, Ishihara discusses the dependence on pressure of the absorption spectrum associated with CO_2. This information does not disclose or suggest display of masks that indicate when values for the signals are outside channel frequency limits are displayed.

As discussed above, in Ishihara, there is no graphical display of data by the system in Ishihara. Rather, information that enters calculator 13 is processed as measurement data. See column 10, lines 36 through 39. Calculator
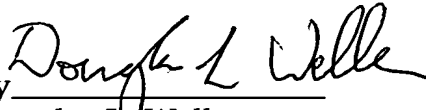
does not display graphs, but rather numerical values. See Ishihara at column 11, lines 39 through 41.

Since Ishihara does not disclose representing information graphically on a display, it is clear that Ishihara does not disclose displaying masks that indicate when values for the signals are outside channel frequency limits, as set out in step (b) of claim 17.

Conclusion

Applicant believes the present application is in condition for allowance and favorable action is respectfully requested.

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